AUGUST, 1964

the florida architect

OFFICIAL JOURNAL OF THE FLORIDA ASSOCIATION OF ARCHITECTS OF THE AMERICAN INSTITUTE OF ARCHITECTS

Abele Resigns - Savage Elected FAA 3rd Vice President

C. Robert Abele, AIA, who was elected 3rd Vice President of FAA at the Annual Convention, last November 1963 has regretfully submitted his resignation effective July 18, 1964. This action was prompted by the decision of his firm Herbert H. Johnson & Associates to establish an office in Washington, D. C. and which Abele will manage.

Everyone was indeed sorry to learn of Bob Abele's resignation as he has served FAA and his Florida South Chapter with distinction. Bob will be missed and at the same time we wish him luck in his new home and assignment.

The Board of Directors of FAA, meeting in regular session on July 18th at the George Washington Hotel in Jacksonville, unanimously elected Herbert R. Savage, AIA the new 3rd Vice President and to complete the unexpired term of Bob Abele.

Savage is widely known in South Florida for his civic and fraternal activities as well as for outstanding architectural design. He is currently on the architectural staff of Deltona Corporation. He was recently appointed by Governor Bryant to represent the 4th Congressional District on the Florida Development Commission. Savage is also a member of Metro's Citizens Advisory Committee for Urban Renewal, and has served as chairman of Miami's Control Board.

He is a past president of the Miami Jaycees, of the Florida South Chapter of AIA and of the Coconut Grove Rotary Club.

Verna Sherman Leaves FAA

As we go to press, it is learned that Verna Shaub Sherman will be leaving the Florida Association of Architects. This terminates a long and fruitful relationship during a period of rapid development and expansion of activities for the Association.

Verna's relationship with the Florida Association of Architects began when the late Roger W. Sherman was commissioned to produce the official publication of the Association in 1954. Both Verna and Roger left the *Miami Daily News* and worked as a team developing the *Bulletin*, a brochure with circulation 100, into *The Florida Architect*.

In 1956 when Roger Sherman became the Executive Secretary for the Association, Verna became his executive assistant. In that capacity she was in charge of the administrative office and convention activities. To Verna Sherman can be accredited the remarkable development of FAA Annual Conventions. It was Verna who organized the technical education programs through appliance and product exhibits at our conventions and coordinated the professional program with the social functions. Many members of FAA are indebted to her for the enrichment received annually at these conventions.

When Roger resigned as Executive Director, Verna took over as Executive Secretary of The Florida Association of Architects and, at Roger's death, as acting-editor of *The Florida Architect*. Many FAA officers and members will cherish fond memories of this period of hard work, long hours and comradery.

It is not known whether Verna plans a European trip or to efficiently manage some other organization's affairs, but wherever she goes, whatever she does, the members of FAA wish her good health, good luck, and happiness. The Florida Association of Architects shall always be indebted to Verna Shaub Sherman for her long and effective service and shall always be grateful.

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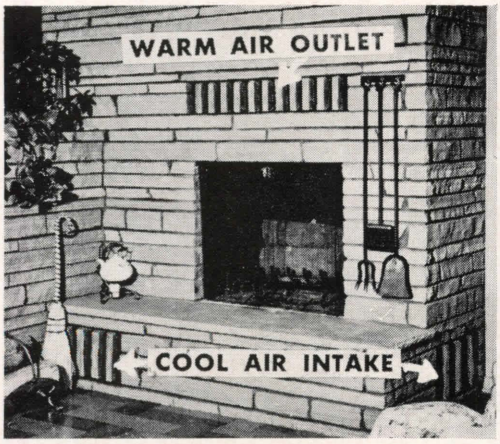

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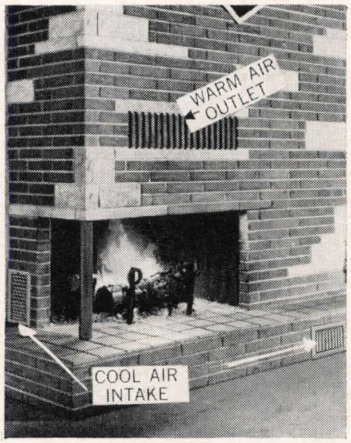

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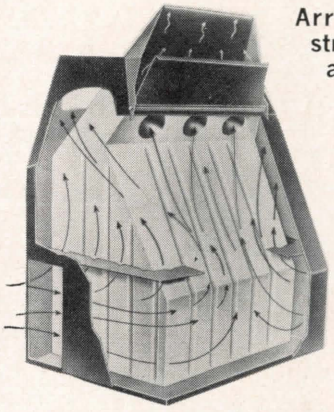

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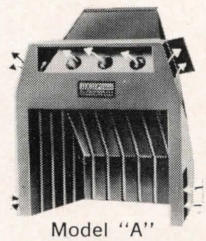
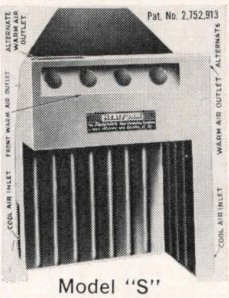


Model "A"



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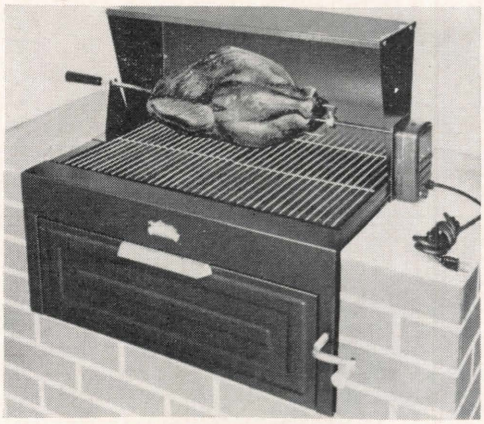

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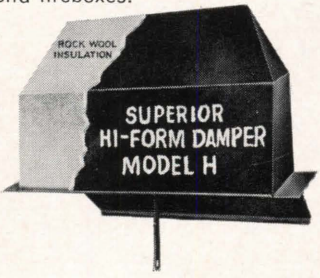

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In This Issue ---

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FOTIS N. KAROUSATOS
Editor

VERNA SHAUB SHERMAN
Business Manager

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NUMBER 8 **1964**

GASGRAM

NATURAL GAS
IN THE HEADLINES

JAX "JUMPING" WITH LARGE-SCALE INDUSTRIAL INSTALLATIONS. Huge Wilson-Toomer fertilizer, liquid sulfur and insecticide plants, converted from coke and propane to natural gas—not only improved efficiency and economy, but eliminated public and employee relations problems caused by air pollution. Florida Smelting's large furnace and five smelting kettles in new Jax location have jumped profits from lead and copper recovery over #5 oil and propane gas formerly used. Florida Gas also reports amazing 51-unit heating installation and two large boilers serving new A. & P. warehouse-store group of three large, ultra-modern buildings.

426-UNIT CLEARWATER APARTMENT COMPLEX GOING NATURAL GAS! Mease Manor, to be operated in conjunction with Clearwater's Mease Hospital, has chosen natural gas cooking because of complete cleanliness and precision temperature controls required in special diets for their registered central dining room and kitchen. Central heating and hot water system will also be served by Clearwater's municipal natural gas system.

NATURAL GAS AIR CONDITIONING BOOMING ALL OVER MAP! Palatka Gas Authority reports 25-ton internal combustion engine driven installation in 30-unit Town House Motel. In Deland, it's 25-tons for brand new Deland State Bank Building installed by Florida Home Gas Co. West Florida Natural Gas (Panama City) put a 75-ton chiller unit in Glen Manufacturing Company (dresses) plant, two 25-ton units in brand new Brown's and Byr-Park beach motels, 32.8 tons in new Walgreen Store, and 50-ton Arkla installation in swank new Howard Johnson Lodge. To top it all, Florida Gas distribution properties won President's Cup Competition for most sales of natural gas air conditioning systems among natural gas utilities in Southern States.

2100°F. TEMPERATURE MAINTAINED ON 24-HOUR SCHEDULE. Concrete pipe kiln 660 feet long and 11 feet wide, operating continuously 24 hours a day, 7 days a week with top temperatures of 2100°F. makes United States Concrete Pipe Company largest customer of Ocala Gas Company.

"TRIPLE DOUBLE" SCORED BY NATURAL GAS IN BAL HARBOUR HOME. Not one but two Arkla air conditioners, two built-in ranges, two water heaters, serve new Fisher residence in swank Bal Harbour. Peoples Gas System also installed pool heater and natural gas dishwasher to utterly rout electric competition.

ORCHIDS TO NATURAL GAS... AND VICE VERSA. Heritage gas lights greet you at the door, set an ideal mood for your leisurely dinner served amid hundreds of blooming orchid plants at Deland's unique new Orchid House Restaurant. Florida Home Gas also supplies natural gas for cooking, water heating and heating in this mid-Florida showplace.

FLORIDA'S PORPOISES NEVER HAD IT SO GOOD! When temperatures drop, the 190,000-gallon porpoise pool at Florida's World's Fair Pavilion is comfortably warmed with natural gas. Unexpected complication: trainers sometimes have trouble persuading porpoises to jump up into all that cold air!

SPURT OF NATURAL GAS ACTIVITY IN FORT PIERCE includes all gas kitchen and central heating in big new Holiday Inn, plus installations in Searstown Shopping Center ranging from tiny bench torches in Jewelry repair shop to large incinerator and complete all-gas kitchens. City's Natural Gas Department now includes Sears, Woolworths, Royal Castle, and Tradewinds Cafeteria among "name" customers.

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Lumber Standards

Results of the standards referendum present a clear-cut mandate to the Department of Commerce to promulgate the new size and quality standards. There can be no further doubt that the changes have the support of those who must decide whether to specify wood or some other material.

Thus commented *William H. Scheick*, executive director of the *American Institute of Architects*, spokesman for nearly 16,000 registered architects in the U.S., after the Commerce Department on June 30 released the results of a referendum conducted earlier this year to determine the acceptability of the proposed new standards for softwood lumber.

To lumber producers, distributors, users, specifiers and related groups, the Commerce Department last April mailed some 16,100 ballots in an effort to settle the standards issue. The agency received an unusually high return. Nineteen per cent, or 3,079 persons, responded, despite the concern of many that the standards ballots were needlessly complicated and involved. The last time there was a change in lumber standards, in 1953, it was based on fewer than 100 replies out of about 3,000 persons queried—only a three per cent return.

Agreeing with Scheick's analysis of the 1964 referendum results were spokesmen for the nation's home builders, home manufacturers, carpenters and lumbermen.

William Blackfield, president of the *National Association of Home Builders* with 40,000 members, said: *Clearly, the lumber industry and those who use its products have taken a stand in favor of new standards which, in home building alone, would cut costs substantially for builder and buyer.*

A representative of the 800,000-member United Brotherhood of Carpenters and Joiners of America suggested that "the outcome of the standards referendum gives the Commerce Department the reason it needs to promulgate the new standards with all deliberate speed."

From *J. A. Reidelbach, Jr.*, executive vice president of the *Home Manufacturers Association*, came this prediction: *Results of the referendum should destroy completely the roadblocks thrown up by those who would prevent the lumber industry from providing a precision-engineered product.*

Mortimer B. Doyle, executive vice president of the *National Lumber Manufacturers Association*, a pioneer supporter of the proposed new standards, said the results *prove that the lumber industry has strong support for its efforts to market a better product.*

Recalling that his industry became involved in standards revision because of "persistent urging from architects, specifiers, home builders and others classifiable as consumers, including representatives of the federal government," Doyle added:

It is particularly significant that these consumer groups are so solidly backing the proposed changes and have voted as high as 93 per cent for their adoption.

With the production of the domestic industry voting 81 per cent in favor of the standards and with 93 per cent of the specifiers, designers and related groups registering similar support, the Department of Commerce now knows that producers and consumers were right in demanding a change in the present standard.

Here is unmistakable evidence that the lumber industry and its most important customers want superior wood products, competitive in every way with other building materials.

Housing and Urban Affairs Daily, influential publication in the building field, noted: "The results were analyzed (by Commerce) in every way imaginable except a general summary to indicate whether the vote was favorable or unfavorable—but to most laymen (among reporters present) it appears favorable."

The *AIA's Bob Piper*, architect representative on the American Lumber Standards Committee which drafted the proposed revisions and forwarded them to the Commerce Department for action a year ago this August, stood steadfastly behind the recommended revisions despite repeated attacks by opponents of the standards.

And in a delegation which called on Commerce Secretary Luther Hodges in person last January, to urge that he put the standards into effect in time for benefits to be realized during the 1964 home building season, no one was more outspoken than the *AIA's Bill Scheick*, who stressed:

Architects, Mr. Secretary, are designers. We deal with many materials and we always find it desirable to reduce to a minimum, dimensional variations or other properties in all materials and product which are expected to be standardized. This not only saves the designer's time but it is very important when basic materials become a part of components or other standardized building units where dimensional standardization is vital.

What is the outlook for the embattled standards as of today? At the time this article was written (mid-July), their fate was anybody's guess.

Despite the clear-cut mandate" signed by architects and others involved in lumber production, specification and use, the Commerce Department announced it would delay, probably until mid-August, a decision on whether to allow the standards to become effective. That decision, Commerce insisted, must await (1) *completion of economic and technical analyses now under way and* (2) *review of the entire statistical tabulation to determine whether there is consensus among producers, distributors and users of lumber.*

Also pending at this writing was the possibility of hearings on the standards issue by a House Small Business subcommittee headed by *Rep. James Roosevelt (D-Calif.)*, whose constituents include the small minority of *green* lumber producers and distributors representing the principal opposition to the standards.

Whereas formerly it had been customary for *green* lumber to be sized

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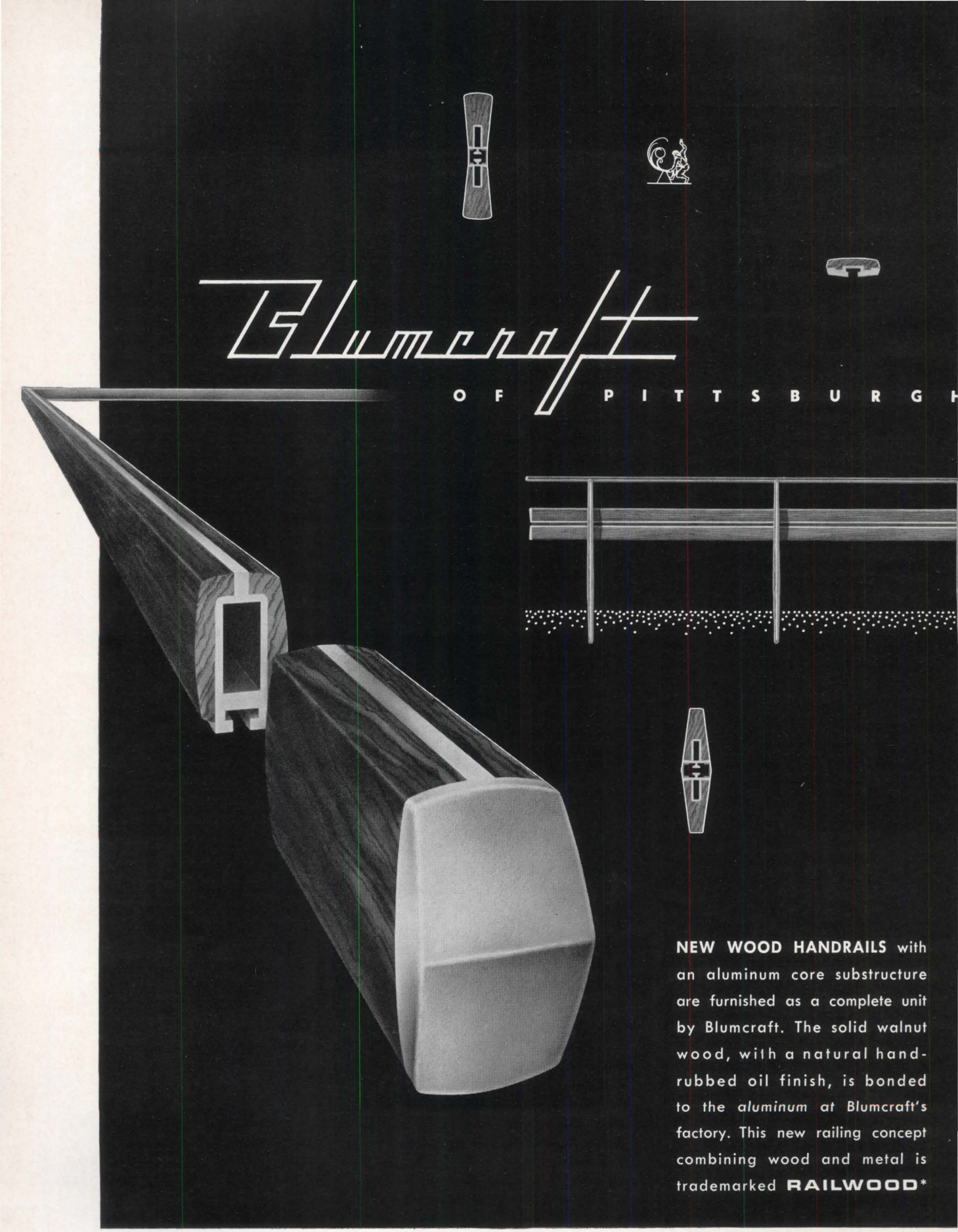

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Laminated Timber Construction

By FRANK J. HANRAHAN
Executive Vice President,
American Institute of Timber Construction

As we see all around us, due to its versatility and economy, the use of structural glued laminated timber is growing by leaps and bounds. This article gives some pointers on its proper application which will assure the architect and others concerned, satisfaction instead of headaches.

For architects, engineers and contractors, structural glued laminated timber is a familiar and reliable product. In one sense, there is nothing new about glued laminated timber. It is still basically the sound structural system introduced into the United States almost 1/3 of a century ago. Yet on the other hand, each year has seen new imaginative applications and refinements in design methods, manufacturing procedures, distribution patterns, and construction.

Since just 12 years ago, when the American Institute of Timber Construction was founded, the capacity of the industry has multiplied several times. This phenomenal growth is due to the versatility and satisfactory performance of the product.

Advantages

Architects like to design with structural glued laminated timber because of the many advantages it offers. The ability of the laminator to provide almost any shape or form required permits the architect a design freedom found in no other material. The architect can express or create almost any attitude he desires at relatively low cost.

Structural glued laminated timbers are fabricated from smaller pieces of lumber which are seasoned prior to fabrication. Thus, there is freedom from the major checking and seasoning defects which are frequently associated with large solid wood members.

Modern laminating techniques permit the better distribution of the natural growth characteristics which occur in lumber and the locating of higher grade lumber at points of higher stress. Bonding of the laminations by means of strong, durable adhesives results in members which are stronger than solid wood members of the same size.

The natural beauty and warmth of wood combine with its functional aspects to permit the structural frame to become part of the interior decor of the structure. The innumerable possibilities for architectural effects and color schemes further enhance the use of laminated timbers in all types of structures.

A low ratio of weight to allowable stress permits reduced costs of construction by reducing required foundation sizes and by reducing erection time and equipment requirements. Ease of working with ordinary carpentry tools further reduces costs.

Time and experience have proven that because of the large sizes of the members, heavy timber construction has excellent fire resistive qualities and performance records in actual fires. This is reflected in model building codes where, in most cases, heavy timber construction is permitted on a comparable basis to one-hour fire resistance rated constructions. An important point to remember is that it is how well a structure performs in a fire, rather than the composition of the materials used, that is the important criterion by which to judge the fire safety of the structure.

Basically, the structural glued laminated timber industry is a custom product industry. This means that the architect may specify the product to fit his design and does not necessarily have to design to fit mass produced products. Normally, a custom built product is expensive; however, custom built structural glued laminated timber, when properly designed, is ordinarily competitive costwise with other structural framing systems. As with any product, improper use or specification can increase first costs and subsequent maintenance costs. It is in this area that the architect can save his client appreciable money.

Design Considerations for Economy

The basic design principles for wood as given in *National Design Specification for Stress-Grade Lumber and Its Fastenings* apply to structural glued laminated timber. These principles are further amplified in *Timber Construction Standards, AITC 100*, published by the American Institute of Timber Construction. To further assist architects and engineers, AITC is now completing work on a Timber Construction Manual. This publication, a handbook similar to the AISC Steel Manual, will give detailed design procedures plus design examples for the most common structural shapes and forms in addition to many helpful tables and charts.

Wood has performed remarkably well for centuries, even under abuse and adverse conditions. For the most satisfactory performance and the least maintenance, however, design consideration should be given to certain basic points with regard to durability.

Flat Roofs

The increasing use of flat roofs has lead to many abuses of structural materials including heavy timber. The principal problem has been with roof structures where insufficient roof drainage has been provided. This,

(Continued on Page 10)

Laminated . . .

(Continued from Page 9)

coupled with a misunderstanding of the functions of camber, have created situations where entire roofs have collapsed due to ponded rain water.

There have been cases where architects refused to permit camber because they wanted the roof dead level, with the following results: *the beams deflected under their own weight, rain ponded in the depressed roof area; the rain load caused increased deflection, permitting additional rain to pond; this continued in a chain reaction manner until failure occurred.* Proper camber or stiffer beam design could have prevented such failures. It should be pointed out that such failures have occurred largely in areas where dead loads are high in relation to design live loads.

To prevent such "chain reaction" failures, AITC has adopted the following recommendations for roof beams:

Minimum roof beam camber shall be 1-1/2 times the dead load deflection. This minimum camber will produce a near level member under the dead load alone after plastic deformation has occurred. Additional camber is usually provided to improve appearance and/or provide necessary roof drainage. Excessive camber should be avoided. Where there is the potential for accidental water ponding which may cause excessive loads and additional and progressive deflection, roof beams shall have a positive slope toward the drain of at least ¼ inch per foot of horizontal distance between the level of the drain and the high point of the roof in addition to the minimum camber. Where pools of water can accumulate near the midspan of simple beams, the beams shall be designed with such stiffness that a 5-pound per square foot load does not cause more than 1/2 inch deflection. For continuous or cantilevered beams, the deflection due to the 5-pound per square foot load shall be checked as a balanced or unbalanced load, whichever produces the more critical condition. The effect of the deflection of the purlins and roof system shall also be taken into account in deflection calculations. Adequate drainage shall be provided to prevent the accumulation of water in the vicinity of the drain due to a sudden heavy downpour.

AITC PHOTO

Bakery and garage with long span glued laminated beams.

Specifications

After reviewing many architects' specifications for structural glued laminated timber, AITC prepared *Guide Specifications for Structural Glued Laminated Timber,* for the guidance of specification writers. This guide specification, while brief, is complete and covers all alternatives which might be selected by an architect. It has been designed so that the architect may copy it directly into his specifications in order that he can be assured of a quality product at minimum cost.

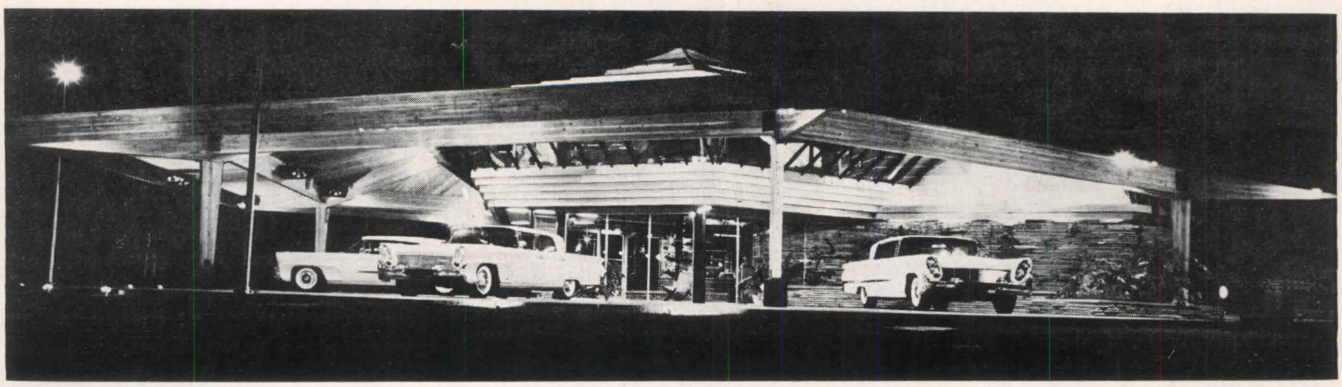
Fabrication and Quality Control

Examination of the guide specification will indicate that principal reliance for receiving quality laminated members is placed on *U. S. Commercial Standard CS 253-63 for Structural Glued Laminated Timber.* This Standard, under development for over four years, was officially promulgated as a Commercial Standard by the U. S. Department of Commerce in 1963. It is unusual in that in order to establish a sound minimum level of quality for the product, it sets forth in detail the necessary minimum requirements for the laminating procedure, quality control and the laminator's personnel, procedures and facilities. Also, the Standard requires that any structural

(Continued on Page 28)

Automobile show room of laminated wood construction. Architect: John Randall McDonald, A.I.A.

AITC PHOTO



Wood Construction's Resistance

By Joseph L. Leitzinger, P.E.
Dean E. Mathews, Jr., P.E.
American Plywood Association

Good Friday, 1964, began in Anchorage, Alaska, just as it had in many previous years, but before that day ended one of the severest earthquakes ever recorded was history.

The lessons learned from this earthquake, 4,000 air miles from Florida, hold much significance to Florida architects. Why—because the earthquakes of the West have much in common with the hurricanes of the East, and structures which exhibit superior resistance to quake forces also possess superior resistance to hurricane forces.

A look at why wood structures performed superbly in the Alaska earthquake is, therefore, important to Florida architects to help assure the best possible hurricane resistance in southern costal construction.

The Alaskan Quake

As reports from Alaska came in during that Easter weekend, it became obvious that this had been no ordinary tremor. It was clear that structures had been subjected to tremendous forces. *These forces gave the quake a rating of 10 on the Mercalli intensity scale.* On this intensity scale, which is based on observations in a specific area, the maximum is 12. *On the Richter - Gutenburg logarithmic scale, the quake registered 8.6 on a maximum of 8.9—truly a quake of gigantic proportions.*

Of particular interest was the low loss of life in Anchorage. The metropolitan population of Anchorage is 102,000, but only nine persons were killed. However, in Skoplje, Yugoslavia, — a city of 200,000 — nearly 1,050 people were killed in an earthquake in 1963.

The investigation team of the American Plywood Association, flown to Alaska only hours after the quake, *attributes the low mortality in Anchorage mainly to the city's modern building code.* Alaskan methods of construction cannot be overlooked either. Most of the modern homes in the city were built with plywood roof sheathing, wall sheathing, and subflooring; and many of the light commercial structures in the city incorporate plywood shear walls and floor diaphragms.

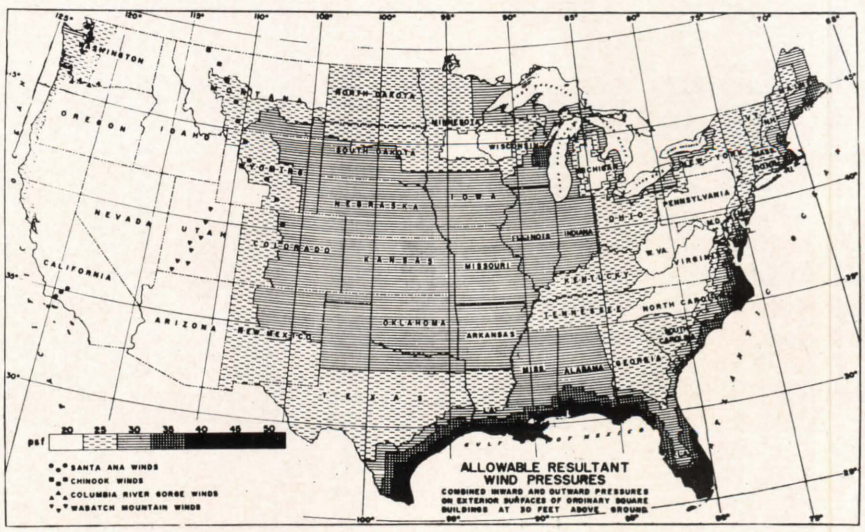
The Anchorage building code requires structures be designed for *Zone 3 seismic forces, the highest seismic classification of the Uniform Code.* As Florida building codes must reckon with some of the highest wind velocities in the country, 120 miles per hour at 30 feet in certain areas (see figure 1) they have something in common with the Anchorage code.

To contend with wind pressures of hurricane force, the *Southern Building Code* prescribes special design wind pressures for Coastal areas, and the *South Florida Code* requires design pressures of about 45 psf for walls of enclosed buildings 20 to 30 feet high. These codes also emphasize that systems must be designed and constructed to transmit wind forces to the ground—a key requirement for both wind and earthquake forces as connections between various structural elements are of paramount importance.

The plywood Association team and representatives from other agencies found that buildings constructed of wood withstood the earthquake extremely well. This successful resistance to lateral forces can be attributed to the natural resiliency of wood construction and the inherently good connections of lumber and plywood structures. According to engineers of the *U. S. Forest Products Laboratory*, fasteners such as nails and bolts help a structure act as a unit under such forces yet provide enough yield to

(Continued on Page 12)

Fig. 1 — Wind Pressures in the United States.



Joe Leitzinger is a registered engineer in Washington and Michigan. He was the senior member of the American Plywood Association's Alaskan investigation team. A civil engineering graduate of Pennsylvania State University in 1952, he has been with the plywood Association since 1956.

Dean Matthews, is a registered engineer and architect in Washington state. He is a 1957 University of Kansas architectural engineering graduate and joined the Association in 1960.

Earthquake . . .

(Continued from Page 11)

absorb the racking and shear stresses induced by vibrations.

Other types of construction such as slab and block construction did not fare so well. In many of these buildings structural parts were not well fastened, and the buildings fell apart under the shaking forces of the quake.

Performance of wood construction in the Alaska quake amplified indications in earlier earthquakes. In the Kern County, California, earthquake of 1952, wood structures also performed well. For example, a two-story masonry lodge hall was almost completely wrecked, but a board and batten wooden hotel across the street was not damaged. Thus, Pacific Fire Rating Bureau's best classification for freedom from damage has long been assigned to wood frame structures which are less than 3,000 square feet in area and three stories in height and where particular consideration has not been given lateral forces.

The experiences of wood and plywood structures in earthquakes can be compared to the experiences of plywood buildings during hurricanes. In 1962 a Florida structural engineer reported that a plywood bungalow had skidded approximately 200 feet during Hurricane Donna. However, this structure which utilized plywood floors, siding, roof sheathing, and interior finish was not significantly damaged; and one-half the doors and windows remained easily operable. The engineer also cited the frequent nail connections of the large plywood sheets to the structural frame as contributing to the structure's remarkable performance.

Earthquake Damage

The Alaska quake was the first occasion to observe construction utilizing structural softwood plywood and modern building methods in an area that was served by an up-to-date building code. It was readily observed that plywood walls, floors and roofs functioned as a structural diaphragm as earlier laboratory tests and calculations had predicted. The original work on plywood diaphragms was conducted at the plywood Association's laboratories in Tacoma, with the cooperation of the *Oregon Forest Products Laboratory,* and the assistance of the *Structural Engineers Association of California.*

Plywood's role in diaphragm construction stems from its unique combinations of properties — high shear strength, good nail-bearing capabilities, large panel size, shock resistance, lightweight and dimensional stability. figure 2 shows how plywood diaphragms function in resisting shear, much as the web of an I-beam. A structure utilizing diaphragm as structural elements, oriented either horizontally, as in a roof diaphragm, or vertically as in a shear wall, functions as a complete unit in resisting forces from any direction.

As may be noted from figure 3, the wind forces acting on a building from without can be resisted by diaphragm construction in the same manner as earthquake forces generated from the mass of the structure are resisted. (See figure 4.) Once the forces are established, the design of the structural elements to resist these lateral forces is computed in the same manner.

(Continued on Page 27)

Fig. 2 — The plywood functions in resisting shearing forces in a manner similar to the web of a beam while the wall plates act as flanges in restisting bending forces.

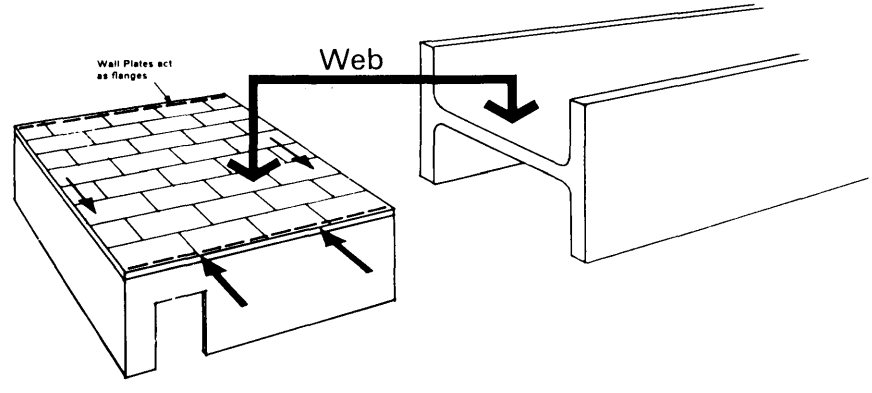
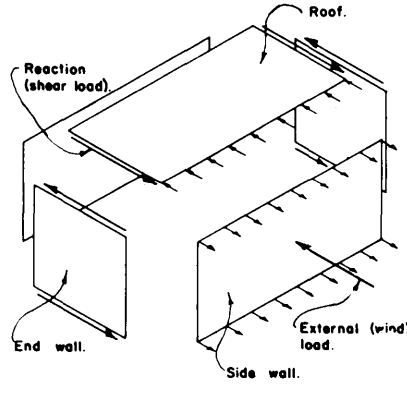


Fig. 3 — Distribution of wind forces showing application of external wind load and resisting roof diagram and shear walls.



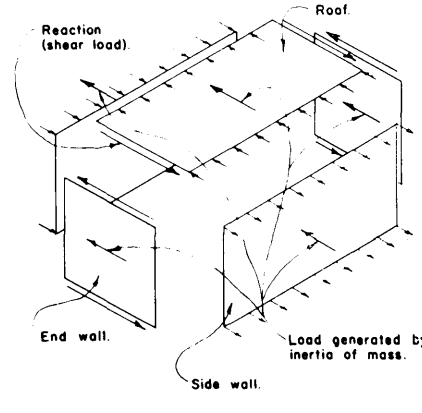
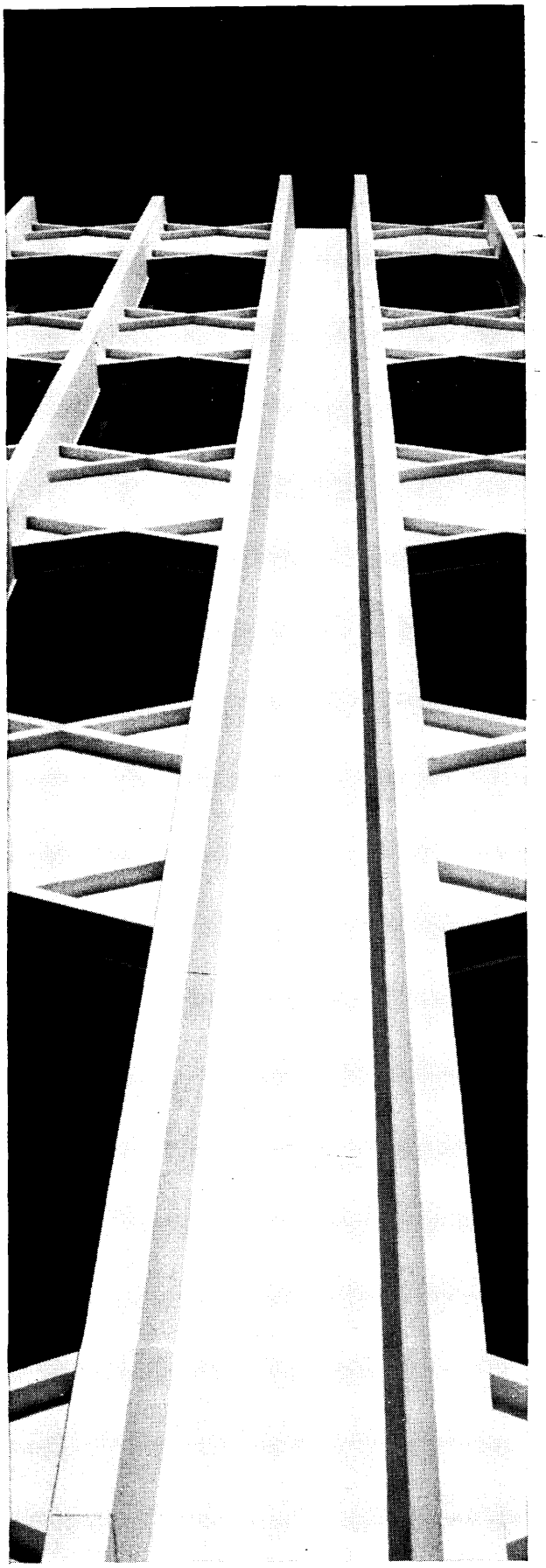


Fig. 4 — Distribution of earthquake forces showing internal generation of load from the mass of the structure and resisting roof diagram and shear walls.



FORM AND COLOR...

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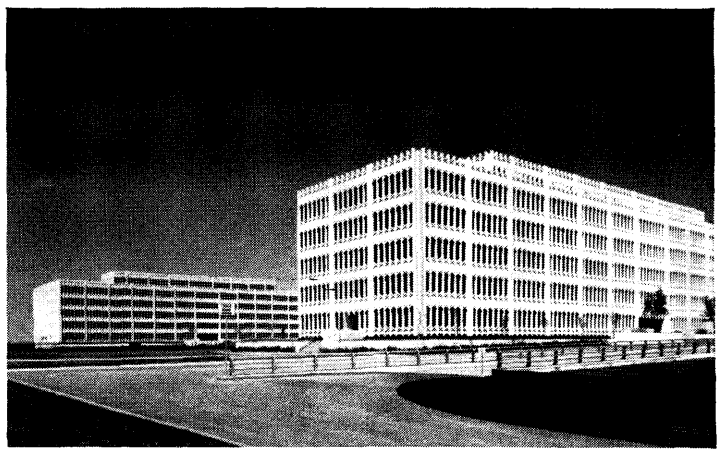

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Product Development and Quality Control

By T. J. LUDDY
Assistant, Research and Testing
Timber Engineering Co.

A reputable manufacturer will take steps to insure that his product is thoroughly engineered from its inception to the point where it comes off the assembly line. Further, if that manufacturer is at all interested in increasing his markets, he will see to it that quality control is exercised over his entire production. Actually, for there to be 100% performance, a product must be engineered *beyond* the production line for there are many products that "check out" on the drawingboard only to fail later in the field. This failure in most cases is due to the product itself but, frequently, it comes through improper application or simply because the requirement concept was wrong from the beginning.

In the development of new products and structural systems, the opinions and evaluations of architects, engineers and builders are valuable inasmuch as it is they who *specify and use* who usually are the ones most vitally affected by how a product performs. A "blue sky" product can often look very promising on the drawingboard or as visualized by the starry eyed inventor with an eye on future untapped markets, but such a product does not always prove to be practical because it may have been unrealistically designed without "the specific need" in mind. The old adage "Necessity is the mother of invention" continues to be workable for, very difinitely, the *best* ideas and products *do* usually arise out of a need.

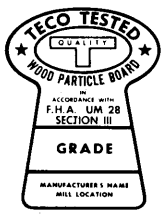
A good example of "designing for need" is found in the development of several new products recently added to the line of structural wood fastenings manufactured by Timber Engineering Company (TECO). The latter part of 1963, TECO was asked to develop a fastening device that would permit the attachment of a 2x4 wood member to a steel lally column. The 2x4 was designed for use as a "rail" for a wood "waffle fence" to shield apartment units from lights of passing cars. In this particular instance there was a fastening problem that could not be fully answered by existing products. Other devices then available might have sufficed but there would not have been the performance envisioned by the architect. Given a clear statement of the problem, TECO's product development section designed and tested a prototype fastener and had an answer in the hands of the architect inside of a week. A good part of the success in the development of this product was due to there being a uncluttered definition of the fastening need.

It was out of a wood industry need that TECO developed its new concealed fastener for use with prefinished siding. Designed to completely eliminate face nailing, the device is expected to make a major contribution to the marketing of wood siding. Consisting of a series of combination teeth and retaining tabs mounted on a ½" wide, 51" long strip, the fastener eliminates the possibility of moisture entrapment behind the siding by providing an automatic vent space between each siding course. Application procedures developed by TECO engineers call for the fastener strip to be nailed vertically at stud locations either over sheathing or direct to the stud. Siding courses are then easily positioned against the retaining tabs and over the teeth. The tabs provide automatic alignment, thus guaranteeing the prescribed one-inch overlap. With a white rubber hammer being used to prevent damage to the paint film, the siding is tapped into place against the teeth of the fastener. Upon entry, the teeth spread and anchor the siding solidly.

TECO first embarked on the siding fastener project three years ago at the request of a special lumber industry committee on paints and finishes. At the time initial steps were being taken by certain producers to develop the market for siding to be prefinished in the mill under quality control conditions. Recognizing an opportunity to, in effect, "carry quality control to the job site" through the use of mill finished material, TECO welcomed the assignment and started to work. A fruition of the firm's efforts came in late 1963 when The Pacific Lumber Company an-

(Continued on Page 18)

Representative TECO Grade Stamps



TECO...

(Continued from Page 17)

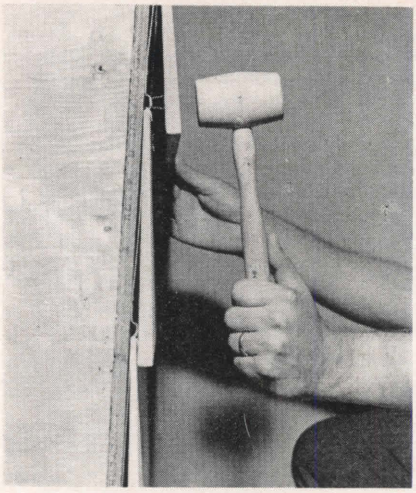
nounced the marketing of its factory prefinished PALCO redwood siding using the TECO fastening system.

The outlook of Timber Engineering Company is unique in that, as an affiliate of National Lumber Manufacturers Association, the firm has as its basic objective to effect the improved and increased use of wood products in major fields of interest to the lumber industry. Through the years since its founding in 1933, the firm's services to the lumber and wood using industries have been many and varied. The first assignment of the company: development, manufacture and distribution of mechanical fasteners for more efficient joining of wood structural members, was the beginning of the Structural Wood Fasteners and Components Division. TECO has developed a wide line of such products, including framing anchors, joist hangers, truss connectors, post anchors and floor bridging and plywood supports.

Continuing need for testing, development and design work in support of the structural fastener activities and an awareness of the growing need for basic and applied research facilities for the wood industries, led to the establishment of TECO's Wood Research Laboratory in 1943. In the years of its operation, the laboratory made major contributions in the development and advancement of wood products, their manufacture and proper use. In 1958, following extensive research on behalf of several plywood producers, TECO was asked to establish and operate a quality control program at four plywood mills. The following year, when independent certification of plywood was made mandatory in the Commercial Standards, TECO extended the service to other interested plywood manufacturers.

The TECO program today, essentially unchanged from its original concept in 1958, is an intensive, comprehensive system based on continuous observation of the production process during a substantial portion of the production time coupled with frequent sampling and on-the-spot testing. It is a system which effectively combines quality control and independent certification.

At each of the twenty mills under



Prefinished siding is hammered on TECO concealel fastener with rubber hammer.

certification, TECO assigns a trained, experienced plywood technician. He works forty or more hours per week in this one mill, inspecting and observing the production process, performing in-line quality control, sampling production and testing in TECO facilities at the plant, check-grading, instructing plant personnel and consulting with and reporting to plant management frequently on all matters concerning quality. Testing in the mill has the obvious advantage of shortening the time span in determining glue line quality.

Shortly after the merits of the program were evidenced, the company extended quality control and certification services to manufacturers of particleboard. A total of nine plants producing approximately one-third of the nation's output are under TECO certification. In addition, three manufacturers of structural glued-laminated products for building and industrial uses empoly the firm's quality control and certification services.

TECO sponsored research and engineering have been the springboard for major developments and provide a firm base for improvement and increased use of wood products. The present day activities of the company, namely, the development and marketing of new products and systems and the performance of independent quality control and certification services in the manufacture of wood products continue to serve this objective. The wood products industries and the users of wood products are the major benefactors.

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FLORIDA GAS

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Lumber Standards . . .

(Continued from Page 7)

larger than *dry*, to compensate for future shrinkage, the war effort generated such demands upon the industry that producers and users alike were willing—indeed, found it necessary—to overlook such matters as the relative size of green and dry lumber after seasoning occurred in place.

This situation continued not only for the duration of World War II but throughout the postwar period—until finally, in August 1963, the *American Lumber Standards Committee*, representing principal producer-distributor-user groups, managed to reach near-unanimous agreement on proposed size and quality changes designed to yield a better product and, once again, require that *green* and *dry* lumber be surfaced to sizes providing, as nearly as possible, the same dimensions in service.

As part of this action, the *American Lumber Standards Committee* decided that—for the fist time on an industry-wide basis — lumber sizes should be tied to a specific moisture content. The ALSC proposed that a 2 x 4, for example, be 1-1/2 x 3-5/8 inches at a maximum moisture content of 19 per cent (15 per cent average), instead of ignoring the question of moisture content as do the present standards. Since the size of any given piece of lumber depends on the moisture it contains, standards that carry no moisture provision are virtually meaningless.

The proposed new dimensions for seasoned and unseasoned stock also would result in precisely engineered dimension lumber having efficient and easily understood structural values.

Architects would be able to plan with precision and accommodate the close tolerance demanded by today's modular units for component construction.

Moreover, the new standards would cut home building costs by up to $100 million annually, according to the estimates of a *House & Home*-sponsored roundtable discussion among architects, builders, lumbermen and other construction specialists.

With such an impressive array of advantages commending the new size standards, it is difficult to understand how Commerce officials can justify, even to themseves, withholding approval of the proposed revisions at this late date.

Somehow, architects, lumbermen, home buyers and others who stand to benefit significantly must find a way to make their voices heard in the higher councils of government which purport to represent the best interests of the people but — judging by the delay and uncertainty surrounding promulgation of the new lumber standards — sometimes fail to meet that lofty goal.

LATE NEWS FLASH

July 24, 1964

Secretary of Commerce Luther H. Hodges today announced that the Department is returning the proposed revision of the American Lumber Standard for Softwood Lumber to the American Lumber Standards Committee.

The Secretary stated that analysis of the responses from producers, distributors, and users of lumber demonstrates that there is no general concurrence in favor of the proposed revision. The Department had previously stated that it would issue the lumber proposal as a voluntary standard only if it had wide industry support and in addition was determined to be in the total national interest.

Mortimer B. Doyle, executive vice president of the National Lumber Manufacturers Association, challenged the grounds cited by Commerce Secretary Hodges to support his return of the standard proposal to the American Lumber Standards Committee.

"Despite Secretary Hodges' statement that 'there is no general concurrence in favor of the proposed revision,' consumer groups, such as specifiers and designers, voted as high as 93 per cent for adoption, while producers representing 81 per cent of domestic output supported the changes," Doyle pointed out. He added:

"Even accepting the raw percentages based upon the inclusion of such diverse groups as broom handle and casket manufacturers who were included by Commerce mandate, the 60 per cent voting for the change indicated a significant dissatisfaction with the present standard and warrants public examination of the economic and technical analysis which Secretary Hodges indicates were not considered in reaching his decision . . . "

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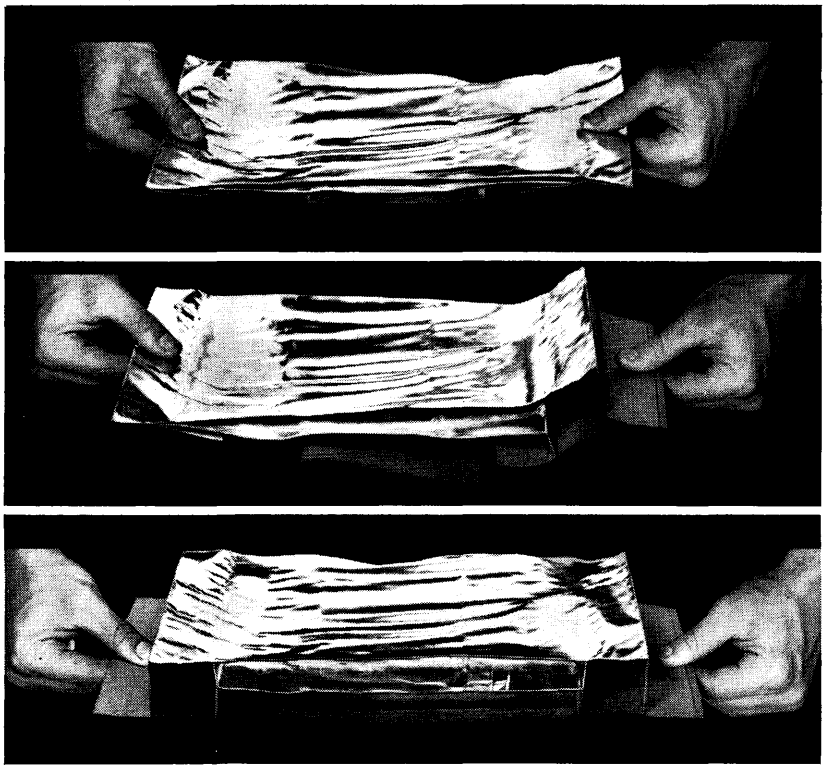

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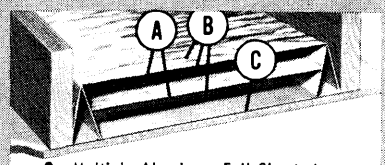

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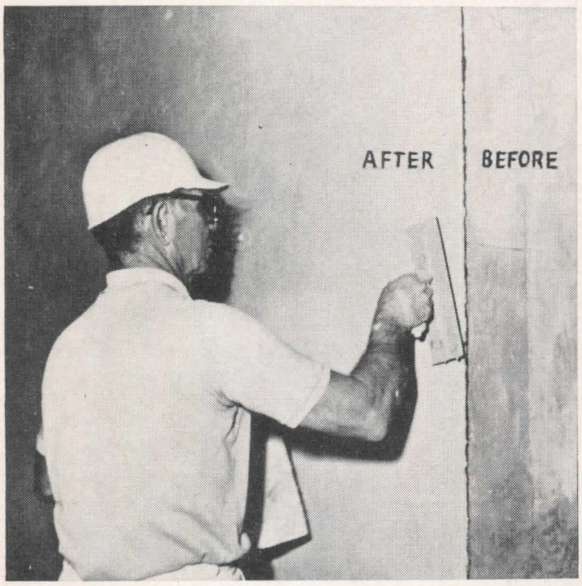

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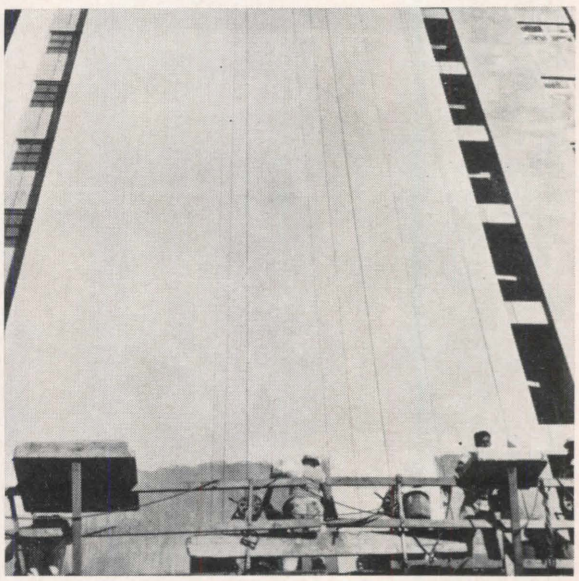

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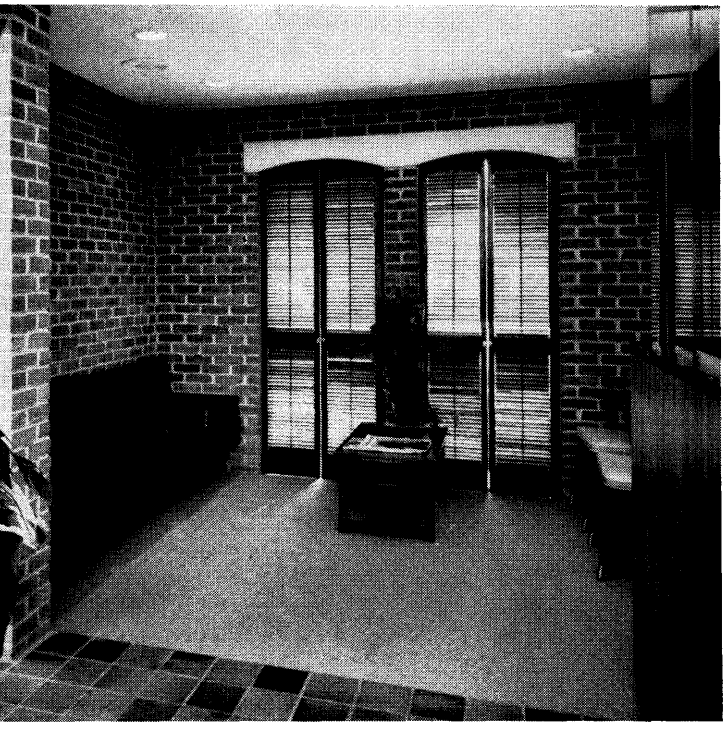
Associate
James B. Holliday

Job Captain
Kenneth Warriner

A deed restriction requiring brick masonry has directed the architects toward this quite solution, which only a few months after its completion has acquired a rather timeless quality. Its strength is in its proportion and the articulation of the interior spaces through the exterior form. The program of oak planting started by the owners has stimulated several neighbors to follow suit. The architects hope that this building and another under construction by their firm across the street will begin to develop a neighborhood feeling through sympathetic usage of materials and landscaping in this medical community near the hospital.

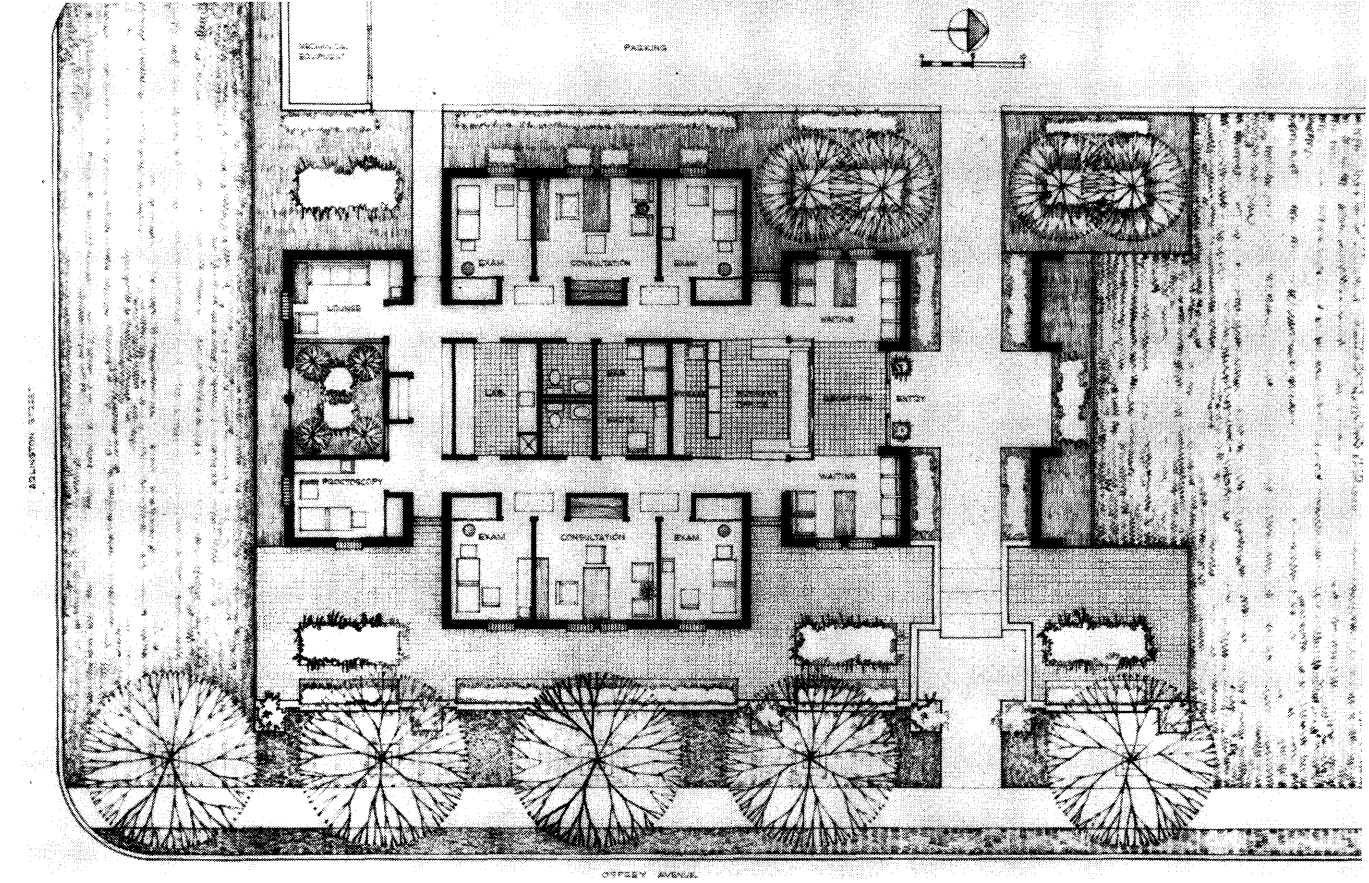


Waiting Room

These offices for the medical practice of two outstanding young internists were designed to accommodate a third associate when growth demands, by the enclosure of the south garden as a consultation room. Each doctor's suite, consisting of his consultation and examining rooms, is served by a corridor modulated by skylit, recessed entries. The service and work facilities form a utilty backbone avalable to all occupants.

The walls of a future building designed for the north half of the property define an entry walk giving equal importance to the approaches from the parking space and the street.

The bricks of the cavity bearing walls are wood moulded and comprise the major architectural surface inside and out. The remainder of the walls are plaster or walnut panelling. Ceilings are acoustical plasted except for wood panelling where dropped. Carpeting on all floors is in natural, undyed wools except service areas floored with heather brown quarry tile. Hot and chilled water is piped to individual fan coil units for climate control of each space.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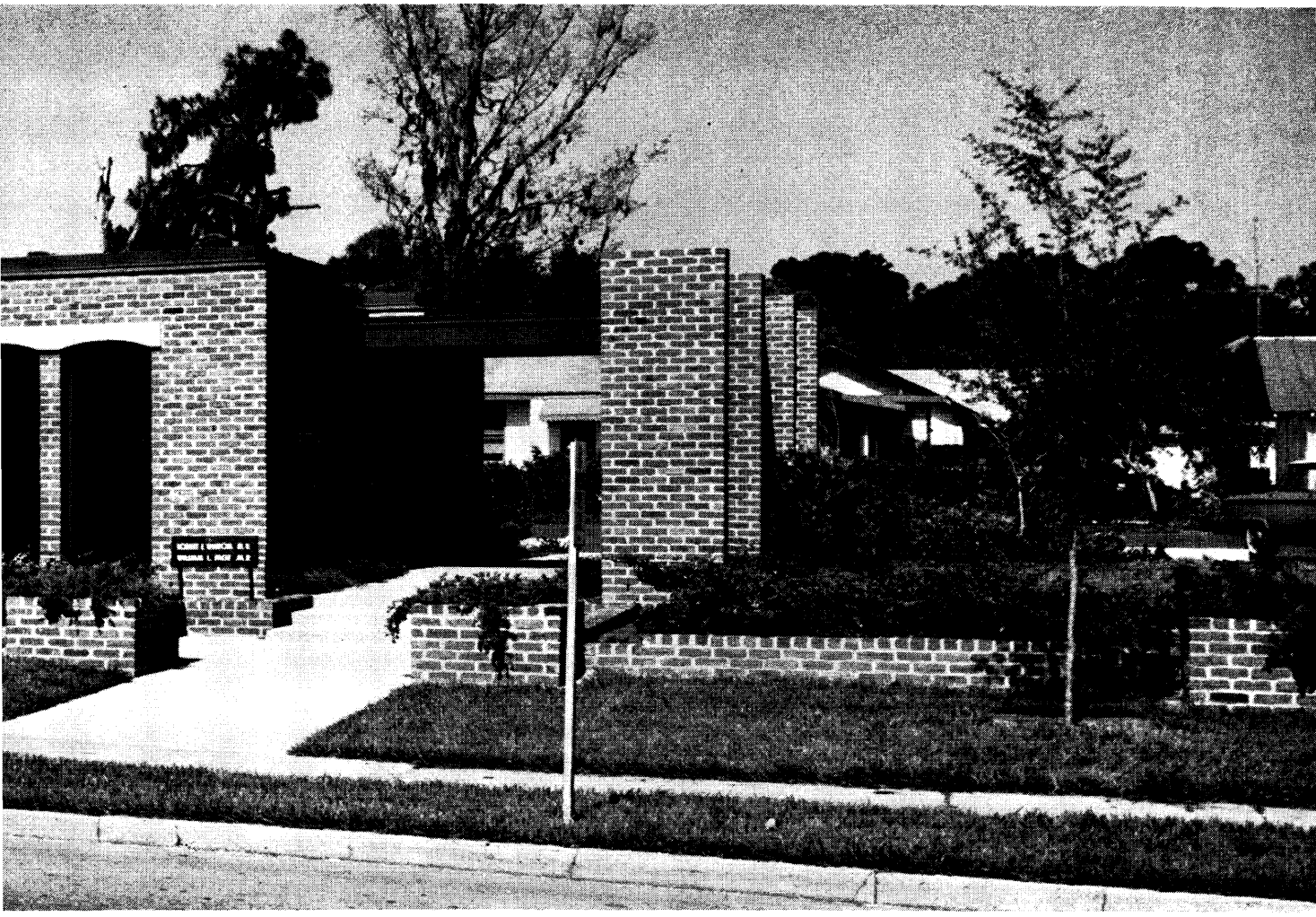
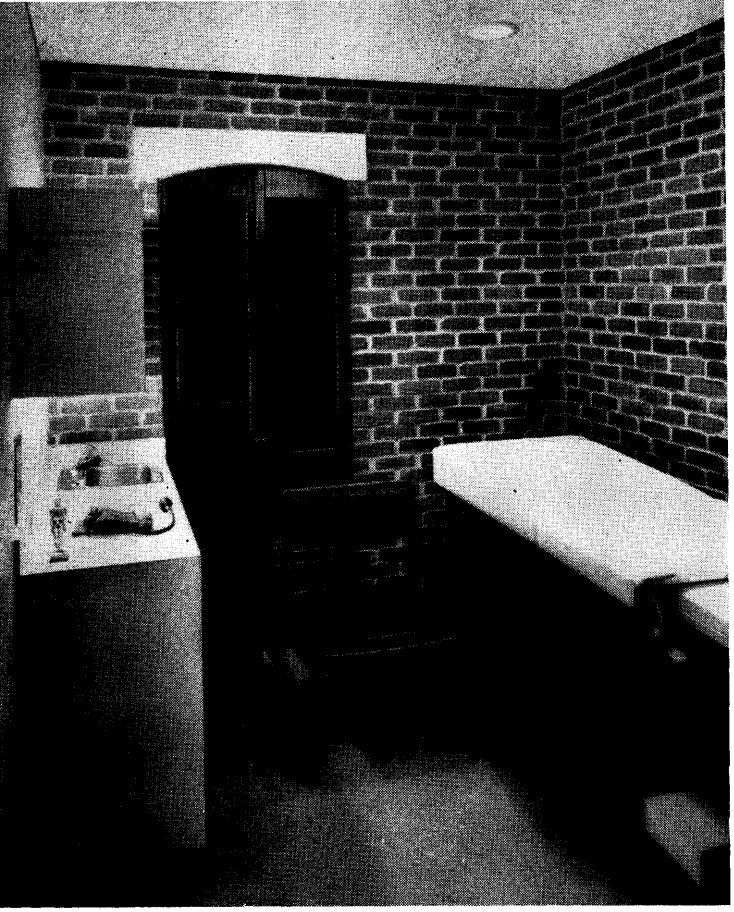
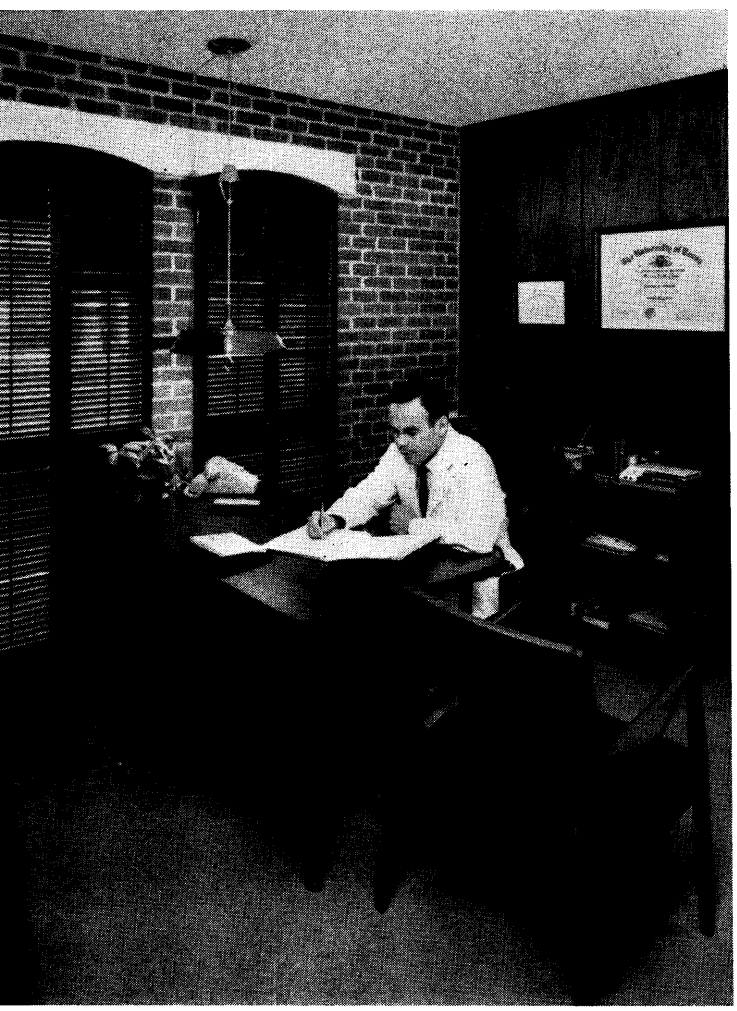
Floor Plan







Above left: Typical Examining Room—operable louvers allow variety for Sun control and privacy.

Left: Consultation Room

Above: East corridor, note sky light

Earthquake...

(Continued from Page 12)

A Department of Commerce report summarizes the need to tie the structure together in their statement, *Design details as well as workmanship were definitely inferior in the great majority of damage cases.* Here again the inherent advantages of plywood and wood frame construction are evident since general construction techniques normally used form connections which tie the various diaphragm elements together.

These inherent advantages are a particularly important point in residential construction where a structural analysis of the roofs and walls to apportion lateral forces is not normally performed. However, the recommended nailing practices and common construction techniques provide a structure with built-in resistance to the forces of hurricanes and earthquakes.

Lessons from the Alaska Earthquake

(1) *Low rise buildings of wood frame construction provide inherently good resistance to lateral forces.*

(2) *Attention to connections between structural diaphragm elements such as floors and walls are particularly important.*

(3) *To assure maximum performance against lateral forces, special attention should be given locations where openings occur near the corners of the building as the rigidity of walls is appreciably reduced in these locations.*

(4) *Nails are extremely efficient shear connectors. A common nail connection cushions and absorbs shock forces preventing major damage.*

(5) *Modern tough building codes, by requiring sound construction practices, are important in keeping loss of life to a minimum.*

(6) *Good field supervision of design and building code requirements is essential in order to reduce damage and loss of life to a minimum.*

It is strikingly evident that good design using materials resistant to lateral forces, such as produced by earthquakes or hurricanes can greatly reduce damage.

Laminated . . .

(Continued from Page 10)

glued laminated timber certified as conforming to it be produced by a laminator who has been qualified by and receives periodic unannounced inspections by a qualified central inspection agency.

AITC has such an agency in its Inspection Bureau. The AITC Inspection Bureau licenses only laminators who have passed the qualification tests and continue to meet all the requirements of CS 253-63 to use the *AITC Quality Marks* and *Certificates of Conformance.*

As architectural awards and articles on structures indicate, both imaginative and cost conscious architects are designing more and more in structural glued laminated timber.

ADVERTISERS' INDEX

The Sanford W. Goin Architectural Scholarship Fund

As a special project to raise funds for the Sanford Goin Architectural Scholarship at the University of Florida, the women's auxiliary of the Florida Central Chapter, AIA, is undertaking a series of auctions-by-mail of original paintings by Florida artists.

To launch the project, six painters from the Clearwater area have donated three water colors, two oils, and one black and white lithograph which will be sold to the highest bidders and all proceeds contributed to the scholarship fund.

The Florida Architect will publish a photograph of one of the paintings each month, with details of its value, colors and size, together with a brief sketch about the artist.

Minimum bids—to be determined by the market value of the painting—will be announced with each photograph. All bids should be sent to Mrs. Edmund MacCollin, 1480 Sunset Point Road, by the 28th of the month in which the picture appears. No checks should be sent until the winner is notified as soon after the monthly deadline as possible, but it is asked that a bank reference accompany each bid.

Garden In Old Westbury

by

Allison Clarke

Is a serent bit of realism—sunlight filtering through an old arbor with clambering vines and a glimpse of the garden beyond. Dark tree trunks and pale branches are feathered against the blue sky, with highlights reflected in the deeper blue of a wide-mouthed jug.

A former state president of New York's National League of American Pen Women, Mrs. Clarke is by profession a writer-turned-painter. She did editorial work, was contributing editor of POETRY WORLD, and authored two books of poetry before taking up a brush and palette. She studied with Long Island water-colorist George Ischamber, and worked in oils with Dorothy Bedell. Choosing marines and still-lifes as her preferred subjects, the artist has received blue-ribbon recognition for her work in both northern and southern art circles. For several vears she was director of "The Little Gallery" in Baldwin, N. Y., and is currently a member of the Nassau Art League, National Arts Club, and Florida Gulf Coast Art Center.

Framed in warm-toned wood an inch wide, the painting Mrs. Clarke has donated for the Sanford Goin Architectural Scholarship Fund is predominantly in earth tones of varying greens and browns, with the blue accents of sky and jug. Its overall size is 16½ by 22½ inches.

Valued at $35, minimum bids will start at $12.50.

Deadline for bid entries is August 28, and all bids should be mailed to Mrs. Edmund MacCollin, 1480 Sunset Point Road, Clearwater, Florida. A bank reference is requested with each bid but no checks should be sent until the winner is notified.

All Roads Lead To Jacksonville - - -

FAA

50th Golden Anniversary Convention

The September Issue will bring the initial comprehensive coverage of your convention activities!

This will be a dynamic program . . . prominent speakers . . . First Annual Florida Craftsman Award . . . Product Exhibits . . . revitalized President's Reception . . . other gala affairs . . . ladies' activities . . . Plan now to attend . . . Celebrate the 50th year of the Florida Association of Architects . . . and bring the whole chapter with you . . . !

NOVEMBER 11, 12, 13, 14, 1964 — GEORGE WASHINGTON HOTEL, JACKSONVILLE